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APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A
FILING DATE UNDER 35 USC 111.

APPLICATION NUMBER: 09/249,727
FILING DATE: February 13, 1999
PCT APPLICATION NUMBER: PCT/US00/02222

By Authority of the
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By:

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09/24/97
02/13/99

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

Transmitted herewith for filing is the following new patent application:
Inventors:

Jonathan Ehrlich Address 150 Highibourne Ave. Toronto, Ontario Canada M5P2J7

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Title: AGGREGATING ON-LINE PURCHASE REQUESTS

Attorney Docket Reference: EWG-086-C

Enclosed are:

- 1) A specification of the invention (27 pages) and drawings (14 sheets)
- 2) A small entity form.
- 3) A Declaration by the Inventors
- 4) A return addressed postcard for filing notification
- 5) A Power of Attorney
- 6) A check for \$497.00 (EWG-#2496) to cover the filing fee calculated as follows:

Base Filing Fee (small entity) ----- \$380.00

Three extra independent claims ----- 117.00

Total Filing Fee ----- \$497.00

Please charge any deficiency in the enclosed fee (or credit any overpayment) to Deposit account 500,433 which is in the name of Elmer Galbi.

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Respectfully submitted,

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00249727 021399

1
2 **Aggregating On-Line Purchase Requests**

3 **Related Application:**

4 The present application is a continuation in part of co-pending application serial
5 number _____ filed February 1, 1999.
6

7 **Field of the Invention:**

8 The present invention relates to the internet and more particularly to a method and
9 system for selling products and helping customers make purchases via the internet.
10

11 **Background of the Invention:**

12 Conducting electronic commerce over the internet has become very common. Many
13 products are sold over the internet utilizing a relatively conventional buyer-seller
14 transaction. That is, a merchant posts a description of products on a Web page
15 along with the price, a purchaser who sees the web page and who wants to
16 purchase the product then submits an order including a credit card number to the
17 seller's Web site. The merchant charges the purchaser's credit card and ships the
18 product to the purchaser.
19

20 The Internet also facilitates other types of commercial transactions and several other
21 internet marketing systems that are in widespread use. The other types of systems
22 that are in widespread use include on-line auction systems and systems where the
23 purchaser provides a price and the system then provides the product or service if the
24 price provided by the purchaser meets certain criteria. Examples of prior art systems
25 are shown in issued US patents 5,835,896 and 5,710,887.
26

proposal (RFP). Multiple suppliers are encouraged to submit bids and contracts to fulfill the order. The bids can be accepted either through electronic means, much like a stock exchange, or through more traditional, manual processes. Once a bid is accepted, the order is then sent to that supplier for fulfillment. After a buy cycle is closed and the orders are processed in one of the above methods, the product is shipped to the customers and the customer's credit card is charged.

Brief Description of the Drawings:

Figure 1 shows the layout of a web page.

Figure 2 shows a flow diagram of the membership process.

Figure 3 shows a flow diagram of the decision guide process.

Figure 4 shows a flow diagram of beginning a buy cycle.

Figure 5 shows flow diagram of the end of a buy cycle.

Figure 6 shows the watchdog cycle.

Figure 7 shows the opening of a buy cycle.

Figure 8 shows the no slice subroutine.

Figure 9 shows the maximum buy subroutine.

Figure 10 shows the current buy subroutine.

Figure 11 shows the price buy cycle.

Figure 12 shows the current price subroutine.

Figure 13 shows a first technique for determining price.

Figure 14 shows a second technique for determining price.

Detailed Description of Preferred Embodiments:

The preferred embodiment of the present invention is in the form of a computer program that implements a web site. The web site which implements the present

1 invention gives purchasers (i.e. customers) a "just in time" demand experience.

2 Purchasers who visit the web site are provided with decision tools and product

3 information necessary to make intelligent purchasing decisions. Once a product is

4 selected, customers are presented with a price schedule based on volume levels.

5 Customers may simply purchase at the posted price or launch a buying cycle.

6

7 A buying cycle is a purchasing cycle that aggregates demand for a particular product

8 within a given period of time. Buying cycles take into account three types of

9 purchase behaviors:

10 1. Destination demand – customers who come to the web site specifically to

11 purchase a product

12 2. Latent demand – those customers who have previously provided buying profiles

13 and wish to be notified when certain purchasing requirements are met. These

14 customers are notified via email when their requirements are matched.

15 3. Impulse demand – those customers who visit the web site for any of a variety of

16 reasons (unrelated to a particular product) and who when they visit the web site

17 discover value and thereby develop a desire for the particular product.

18

19 Any of the above types of demand can motivate a customer to join a buying cycle.

20 At the time a customer joins a buying cycle, the customer is made aware of the

21 MAXIMUM price they would have to pay should no other customers join that cycle.

22 As additional customers join the buying cycle, the unit price declines. With the

23 present invention buyers work together instead of against each other. In contrast to

24 the operation of the present invention, in online auctions, customers bid against each

25 other.

26

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The following is a specific example of a price schedule that appears in price volume window 4:

Items ordered in the cycle:	Unit price:
1-10.	500
11-30.	475
31-50.	450
50-100	425
100+	400

It is noted that Figure 1 is a block diagram of a web page. An actual web page would include colors and graphics to make the web page appealing to consumers. The web page could also include various other related information, links and choices.

Customers who visit the web site can order the product by pressing (i.e. clicking on) the buy button 6. The number of customers who have ordered the particular product during the particular buy cycle is shown in the orders received window 5. The time remaining in the particular buy cycle is shown in window 7. When the buy cycle ends, no further orders are accepted for the particular product during that particular buy cycle and the orders are filled through one of two ways. The first technique is used where a contract or arrangement has been pre negotiated with a partner (i.e. a supplier, distributor, or other fulfillment agency). In this situation once the buy cycle is closed, the order is processed and sent to the partner for fulfillment of the order. In situations where no supply contract has been pre negotiated, when the buy cycle closes, the order is put together and put out for bid, much like a request for proposal (RFP). Multiple suppliers are encouraged to submit bids and contracts to fulfill that order. The RFP and the bids can be handled either through electronic means, much

[illegible]10 **Table A.1: Price Structure Construction**

	Number of Items		
Slice Number	Minimum	Maximum	Price
0	$n_0=0$	n_1-1	P_0
1	n_1	n_2-1	P_1
2	n_2	n_3-1	P_2
3	n_3	n_4-1	P_3
m-1	n_{m-1}	n_m	P_{m-1}

ewg-086-Pat App 2-11-992

Table A.2: Price Structure for Sample Buy-Cycle

Slice Number	Number of Items		Price
	Minimum	Maximum	
0	0	3	\$10.00
1	4	9	\$9.75
2	10	11	\$9.00
3	12	49	\$8.00
4	50	199	\$6.50

Note:

1. By definition, a price structure as at least two (2) price slices.

2. The largest maximum number of items for the last price slice corresponds to the cut-off point, which, if reached, will end the buy-cycle.

In order to manage buy-cycles, the following operations are defined. Each buy-cycle is identified through a unique buy-cycle identifier called `buy_cycle_id`.

1. `Begin(buy_cycle_id, time_t)`, which initializes and starts a buy-cycle that will last until `time_t`,

2. `End(buy_cycle_id)`, which terminates the buy-cycle either manually or by being called from the buy-cycle watchdog, and

3. `Watchdog(buy_cycle_id)`, which automatically supervises the status of a selected buy-cycle.

The following operators are defined to determine state information about buy-cycles:

- 1 1. Open(buy_cycle_id), which returns a Boolean result on whether or not the buy-
- 2 cycle referenced by the unique buy-cycle identifier buy_cycle_id is active,
- 3 2. No_slice(buy_cycle_id), which returns the number of slices m for the specified
- 4 buy-cycle,
- 5 3. Max(buy_cycle_id), which returns n_m for the specified buy-cycle,
- 6 4. Current(buy_cycle_id), which returns the current number of purchase requests for
- 7 the buy-cycle, represented as $n_{current}$,
- 8 5. Price(buy_cycle_id, n), which returns the price point for the specified cycle with n
- 9 purchase requests, and
- 10 6. Price_current(buy_cycle_id)—the logical equivalent of
- 11 price(buy_cycle_id, $n_{current}$), which returns the price point corresponding to
- 12 the current number of purchase requests.

13

14 Figure 4 shows the process that is called whenever a defined buy-cycle needs to be

15 set into active mode. For example this could occur as indicated by box 37 in Figure

16 3. As indicated by block 210, a subroutine named open() and which is shown in

17 Figure 7 determines if the particular buy cycle is already open. If the buy cycle called

18 is already open, this information is returned to the main program as indicated by

19 block 211. This could either mean that there has been some error or it could be a

20 notice to the main program to go to block 36 shown in Figure 3. As indicated by block

21 212, if the buy status is not active, the status is set to active. Next, as indicated by

22 block 213 the time limit for the buy cycle is set to a value $time_i$. As previously

23 indicated the value $time_i$ could either be a fixed value or it could be determined in a

24 number of ways dynamically.

25

1 At the end of a buy cycle, the subroutine shown in Figure 5 is called. First as
2 indicated by block 220, a determination of whether the cycle is already open is made
3 by the subroutine open(). If the buy cycle is not open, no action is taken as indicated
4 by block 221 and control is returned to the calling program. If the buy cycle is open,
5 the status is set to inactive as indicated by block 222 and the buy cycle administrator
6 (which could be another program or a human operator) is notified as indicated by
7 block 223. At this point the orders that have been entered during the buy cycle are
8 executed in a conventional manner. That is the products are shipped and the
9 customer's credit cards are charged.

Figure 6 shows the subroutine called "watchdog" which operates while a buy cycle is active. The watchdog process oversees the status of a specific buy-cycle from its inception until the buy-cycle is either terminated manually or when certain buy-cycle-specific time or volume limits have been achieved. As indicated by block 230 and 231 a check is first made to insure that the buy cycle is in fact open. As indicated by blocks 232, 233 and 234, the current time and the buy cycle expiration time are obtained and compared. As indicated by block 234 if the if the buy cycle time has ended the subroutine end() is called. Blocks 235, 236 and 237 indicate that if the buy cycle is active, the current number of requests is obtained and compared to the maximum number of requests. If the number of requests exceeds the maximum number allowed for that buy cycle, the buy cycle is ended. If the number of requests is less than the maximum, the subroutine goes to sleep for a period of time as indicated by block 239 and it then repeats. Providing such a sleep period for such a subroutine is conventional.

Figure 7 shows the subroutine which is used to determine if a buy cycle with a particular ID is open. A conventional data base (not explicitly shown) is used to store the ID's of the open buy cycles. Blocks 240 and 241 indicate that the ID of a buy cycle is compared to data in a data base and then a determination is either made that the buy cycle is active (block 242) or a determination is made that the buy cycle is not active (block 243).

Figure 8 shows the subroutine which is used to determine the number of price slices within a buy-cycle. This subprogram sets the value of the variable "m". As indicated by blocks 250 and 251, the number of rows in the table (see above table 1) for a particular buy cycle ID is obtained and used to set the value of the variable "m". Block 260 and 270 in Figures 9 and 10 shows how the variables "no_items_max" and "no_items_current" are set. Figure 9 shows how the maximum number of items available for the buy-cycle is determined. Figure 10 shows the current number of purchase requests within the buy-cycle is determined. It is noted that the SQL calls are a standard technique for getting data from a data base such as the commercially available and widely used Oracle data base marketed by Oracle Corporation or the widely used Access data base marketed by Microsoft Corporation. The particulars of the data based used to store various information used by the described embodiment of the invention are conventional and not explicitly shown herein.

Figure 11 shows how the price at which orders are executed is calculated at the end of a buy cycle. The operator illustrated in Figure 11 is used to calculate the price corresponding to the given number of purchase requests within the buy cycle. Block 280 shows that at the beginning of the subroutine the variables are initialized. Next as indicated by block 281, an SQL call to the data base is made to set the variables

1 P_0 and n_0 . Blocks 282 and 283 show that the variable m is incremented and that the
 2 value of the variable P_m and n_m is obtained from the data base. Next as indicated by
 3 block 284 a check is made to determine if n_m is greater than n . As indicated by block
 4 285, if it is larger the price is set to P_{m-1} . If it is smaller, a check is made by block 286
 5 to determine if n equals m . If it does the price is set to P_m . If it is not the process
 6 repeats to block 282.

7
 8 Figure 12 shows a block diagram of the operator used to calculate the price
 9 corresponding to the current number of purchase requests within the buy-cycle. First
 10 as indicated by block 290, the value of n is set. Next as indicated by block 291 the
 11 subroutine price() is called to set the price.

12
 13 As previously indicated the price at which orders are filled depends upon whether or
 14 not a pre-negotiated and pre-established commitment has been obtained from a
 15 supplier to provide products at the prices posted. If such a contract exists when the
 16 cycle is done product is supplied at that price. This is shown by blocks 131 and 132
 17 in Figure 13. Blocks 131 and 132 indicate that the final price is calculated based
 18 upon the supplier price schedule.

19
 20 If the prices posted are estimated prices, and no contract exists with a supplier to
 21 supply prices at the posted prices the sequence shown in Figure 14 occurs. Once a
 22 buy cycle ends as indicated by block 38, the number of products that have been
 23 ordered is calculated as indicated by block 141. This information is disseminated to
 24 prospective suppliers and these suppliers make offers as indicated by block 142.
 25 The best value is determined as indicated by block 143 and then a supplier is
 26 selected as indicated by block 144. Finally as indicated by block 39 orders are filled

The present invention drives true value to its customer base when demand volume can be identified and coordinated to facilitate transactions. In order to ensure that buying cycles are maximized by optimum market reach, techniques such as the following can be used:

When a customer has joined a buying cycle for a particular product, they can be given the opportunity to notify their colleagues, via a pre-formatted email, about the web site and about the buying cycle in progress. Such a tool enables customers to draw as many people possible into the buying cycle for maximum price benefit i.e. the more people that join a cycle, the lower the price per unit. The email can communicate the value proposition, give details of the buying cycle in progress, and invite the recipient to visit the web site and join the buying cycle themselves. Such a tool can drive awareness at a "grassroots" level, leveraging personal networks and communities that have been empowered by the inherent benefits of the Internet.

In order to further drive audience exposure to buying cycles, Sponsor Partner Program can be used for vertical online communities (e.g. companies, organizations, etc.) and horizontal online communities (e.g. organizations that provide information which is displayed on web sites etc.). Such partners have a large member base in place, and they can be used to uniquely provide the service available by use of the present invention to this mass audience.

Sponsor partners can be given strategic branding opportunities through a sponsor banner located throughout the web site which implements the invention. This branding will be visible to those customers entering through their respective community site. This co-branding opportunity will allow the partner to further build a

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6) The system recited in claim 1 wherein said buy cycle is closed after the rate at which orders are being received falls below a pre-established rate.

7) A system for facilitating the purchase of products via the internet and which operates in accordance with a buy cycle, said system comprising means which posts a web page at the beginning of a buy cycle and which describes a product and which lists prices for various quantities of the product, means which accepts orders from purchasers and which tracks the number of purchasers in a buy cycle and which closes said buy cycle based upon pre-established criteria, and means which processes the orders received in a buy cycle.

8) A method for facilitating the purchase of products via the internet during a buy cycle, said method comprising

posting a web page at the beginning of a buy cycle and which describes a product and which lists prices for various quantities of the product,

accepting orders from purchasers,

tracking the number of purchasers in a buy cycle,

closing said buy cycle based upon pre-established criteria, and

processing the orders received in a buy cycle.

19 9) The method recited in claim 8 wherein said buy cycle is closed after a fixed
20 amount of time.

22 10) The method recited in claim 9 wherein said web page post the length of said
23 fixed amount of time.

25 11 The method recited in claim 10 wherein said web page posts the amount of time
26 remaining in said fixed amount of time.

WILLIAM H. BROWN, President, American
Society of Mechanical Engineers, Inc.,
New York City, N.Y.

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[illegible]

POWER OF ATTORNEY

Commissioner of Patents and Trademarks
Washington, D. C. 20231

Sir:

ACCOMPANY INC. is the assignee of the invention:
Entitled: **AGGREGATING ON-LINE PURCHASE REQUESTS**
Docket: **EWG-086-C**,
the specification of which is being filed herewith.

ACCOMPANY INC. as assignee, hereby appoints the following attorney to prosecute this application and to transact all business connected therewith in the U. S. Patent and Trademark Office.

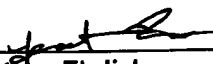
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Date: Feb 12/99



Jonathan Ehrlich
ACCOMPANY INC.
Vice President

RECEIVED - 226466

[illegible]

104 Hambly Ave, King City, Ontario, Canada L7B 1J1
Post Office Address and Residence

CLAIM OF SMALL ENTITY STATUS

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) and 1.27(c) - SMALL BUSINESS CONCERN

I hereby declare that I am an official empowered to act on behalf of the small business concern identified below:

NAME OF CONCERN: ACCOMPANY INC.

ADDRESS OF CONCERN: 715 Bryant St. #102.,
San Francisco, CA 94107

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third-party or parties controls or has the power to control both.

I hereby declare that the rights under contract or law have been conveyed, to and remain with the small business concern identified above with regard to the invention:

Entitled: AGGREGATING ON-LINE PURCHASE REQUESTS

By inventors: Jonathan Ehrlich, James Rose
Salim Teja, and Benoit Turgeon

Docket: EWG-086-C
described in the specification filed herewith.


No rights to the invention are held by any person who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small business entity is no longer appropriate. (37 CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: Jonathan Ehrlich

TITLE OF PERSON SIGNING : Vice President

SIGNATURE 

DATE: Feb 12/99

Figure 1, (Web Page)

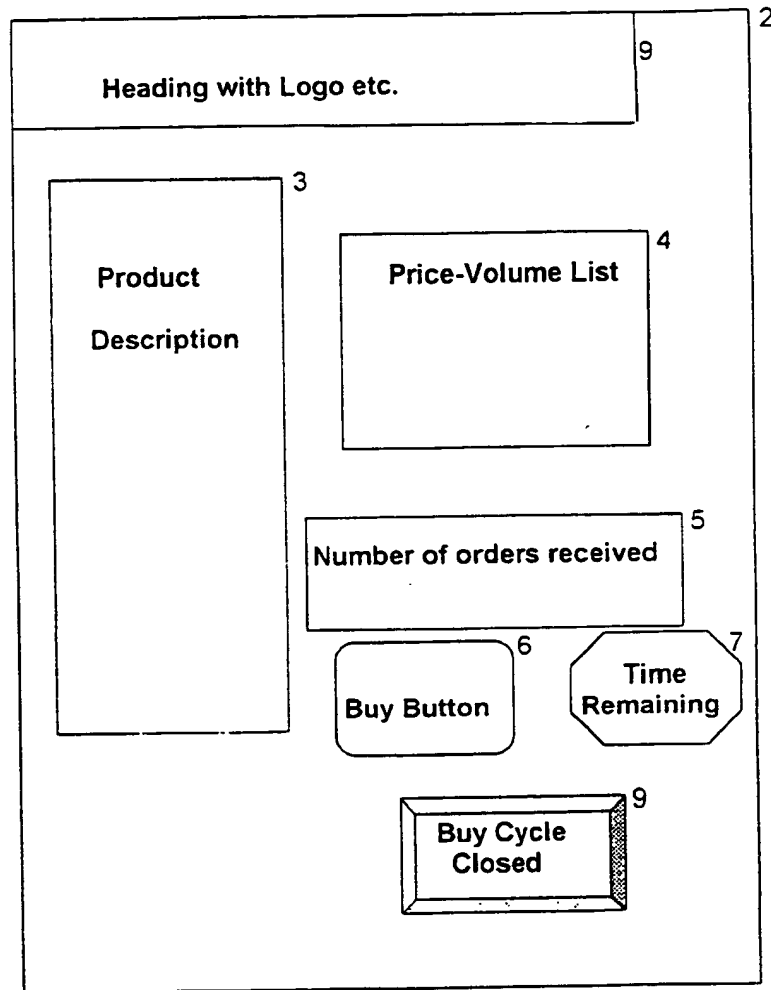
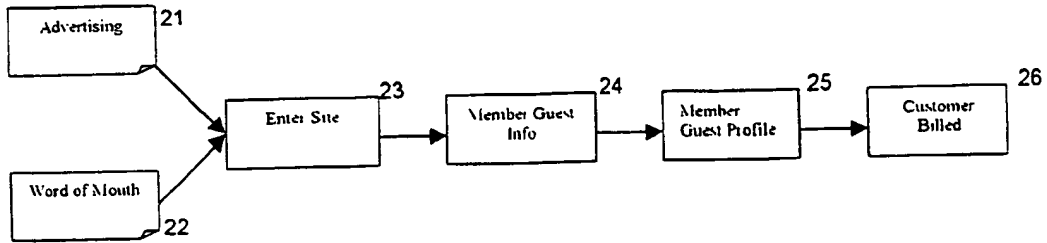


Figure 2



	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534</
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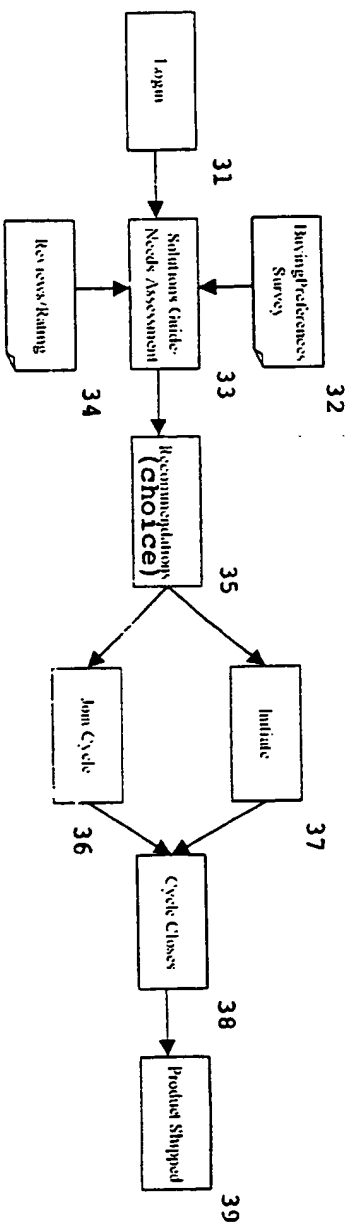


Figure 3

09240727.021399

Year	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	



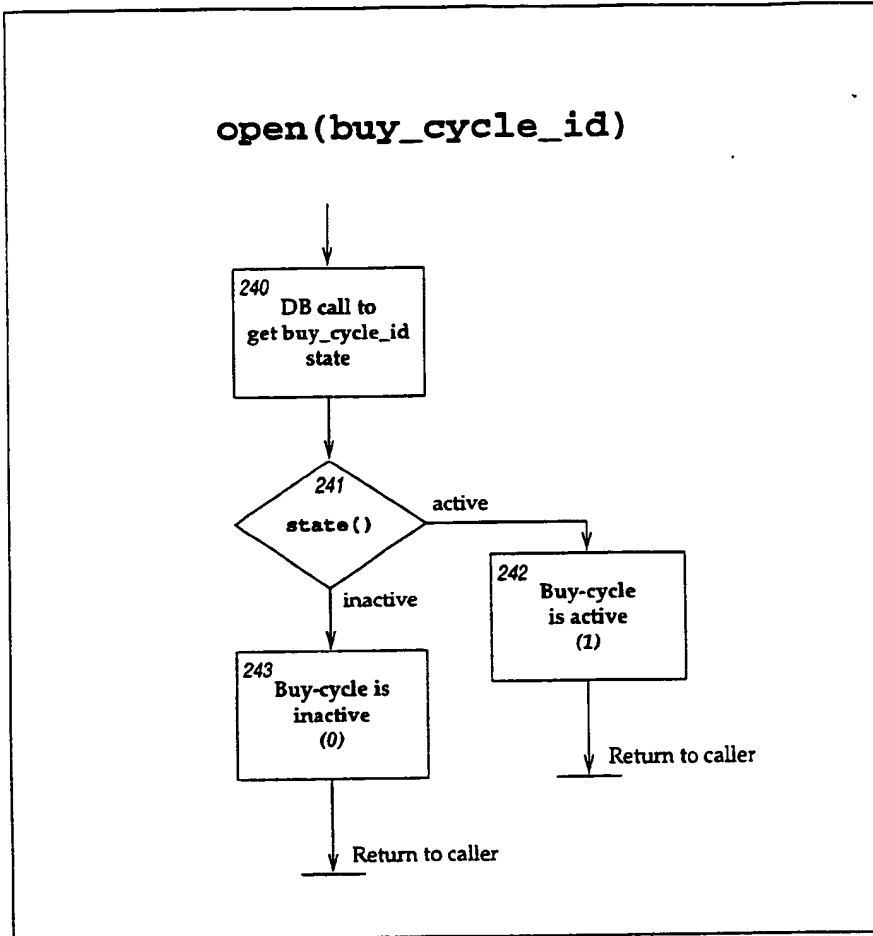
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open()}
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status to  
inactive]
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Buy-cycle  
not active]
    222 --> 223[223  
Notify buy-cycle  
administrator]
    221 --> Exit1(( ))
    223 --> Exit2(( ))
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    Exit2 --> Return2[Return to caller]

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[illegible]

Figure 7



[illegible]

[illegible]

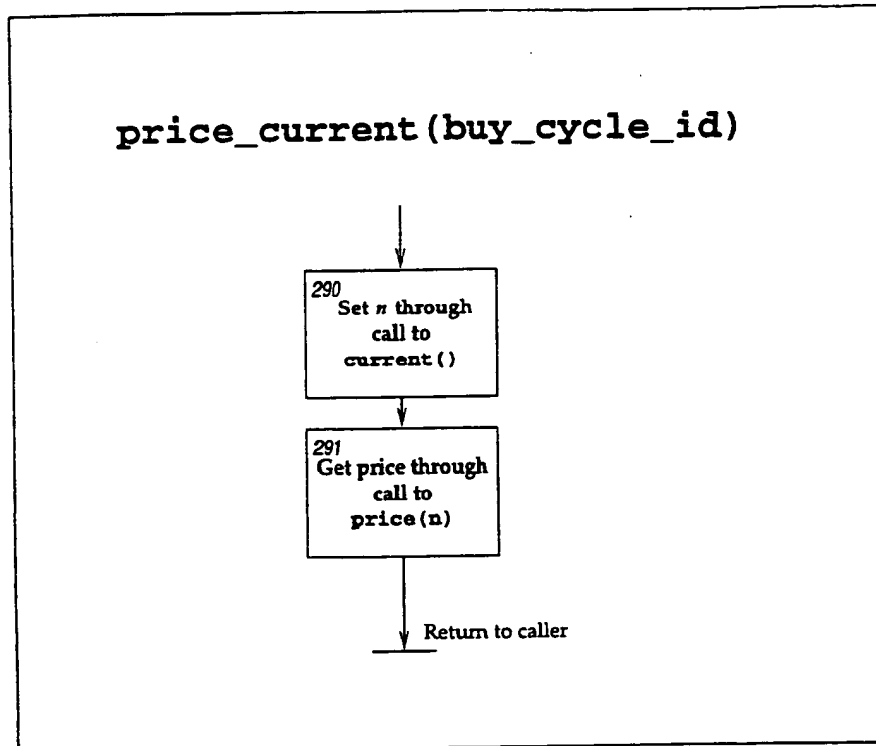
Figure 1. The effect of the concentration of the *Agrobacterium* strain on the transformation efficiency of *Agrobacterium* strain 101. The *Agrobacterium* strain 101 was cultured in the YEA medium for 24 h at 28°C. The cell concentration was adjusted to 1.0 × 10⁸ cells/ml. The cell suspension was mixed with the cell suspension of the *Agrobacterium* strain 101 at the concentration of 1.0 × 10⁸ cells/ml. The mixture was then transformed into the *Agrobacterium* strain 101. The transformation efficiency was determined by the number of transformants per 10⁸ cells. The results are shown in Table 1.

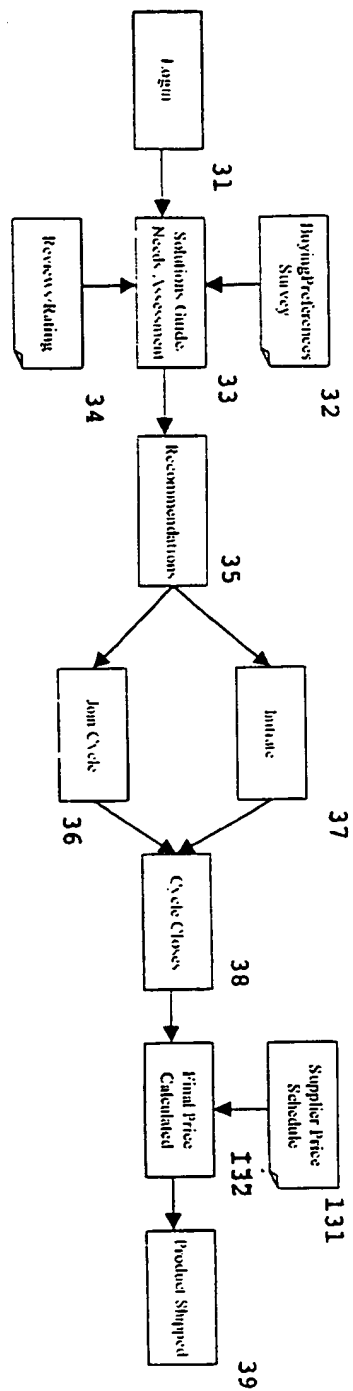


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Figure 12





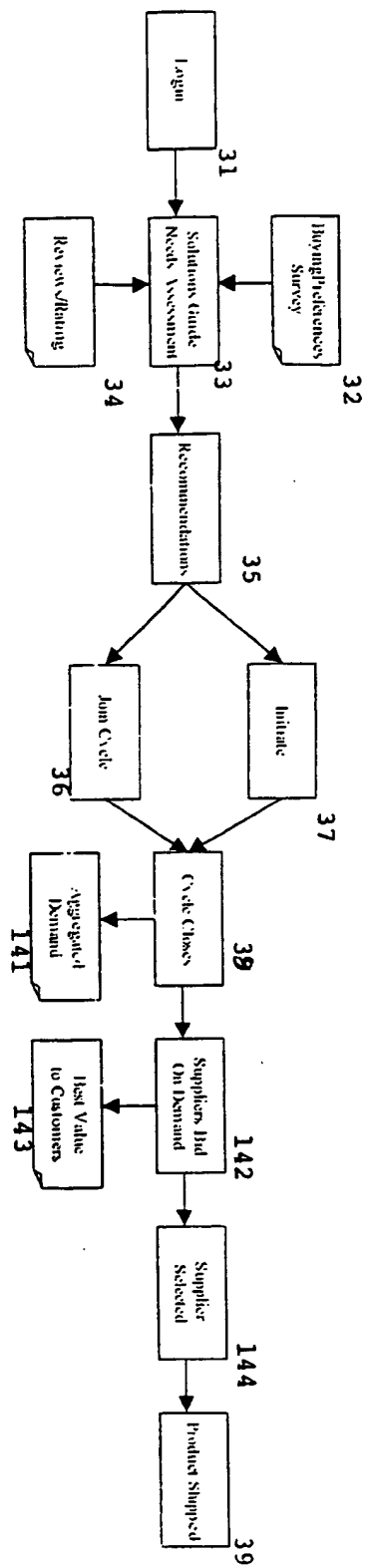


Figure 14

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